

Replication Code for Empirical Results

2023-09-06

Preamble

We provide the replication code for the empirical results in the paper as an R markdown file. This file corresponds to the actual code we used to generate the main empirical results in the paper. To run the replication code, you will need to install R and RStudio and all the packages that we load. We recommend that you use <https://cran.rstudio.com/> as your main mirror for package installation.

Access to the data

As per our agreement with Statistics Portugal we cannot provide the data we used in the replication package. Each researcher interested in accessing it will have to obtain permission directly from Statistics Portugal. The data we used in this project is part of Statistics Portugal's objective of making administrative data from the Portuguese tax authority and other public agencies available for statistical production and research. For information on how to access the data see the Statistics Portugal website (https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_pufs). You can contact Miguel Godinho de Matos (miguel.godinhomatos@ucp.pt) for advice on how to request the access to the dataset that we used.

Replication

We provide a full run of the replication code below. Running the code on Statistics Portugal infrastructure took approximately 5 minutes on a Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-162-generic x86_64) with R version 4.2.3 (2023-03-15). The machine had 16 virtual CPUs and 774GB of RAM.

The system had the following package versions and locale configurations:

locale:

```
LC_CTYPE=C.UTF-8      LC_NUMERIC=C          LC_TIME=C.UTF-8
LC_COLLATE=C.UTF-8   LC_MONETARY=C.UTF-8  LC_MESSAGES=C.UTF-8
LC_PAPER=C.UTF-8     LC_NAME=C             LC_ADDRESS=C
LC_TELEPHONE=C       LC_MEASUREMENT=C.UTF-8 LC_IDENTIFICATION=C
```

attached base packages:

```
stats      graphics  grDevices  utils      datasets  methods    base
```

other attached packages:

```
forcats_0.5.1      stringr_1.4.0         dplyr_1.0.7
purrr_0.3.4        readr_2.0.1           tidyr_1.1.3
tibble_3.1.8       ggplot2_3.3.6         tidyverse_1.3.1
xtable_1.8-4       directlabels_2021.1.13 alpaca_0.3.3
stargazer_5.2.2    ggthemes_4.2.4        data.table_1.14.0
lfe_2.8-7          Matrix_1.3-4
```

loaded via a namespace (and not attached):

zoo_1.8-9	tidyselect_1.1.1	haven_2.4.3	lattice_0.20-44
colorspace_2.0-3	vctrs_0.4.2	generics_0.1.0	utf8_1.2.2
rlang_1.0.6	pillar_1.8.1	withr_2.5.0	glue_1.6.2
DBI_1.1.1	dbplyr_2.1.1	readxl_1.3.1	modelr_0.1.8
lifecycle_1.0.2	cellranger_1.1.0	munsell_0.5.0	gtable_0.3.1
rvest_1.0.1	tzdb_0.1.2	parallel_4.2.3	fansi_1.0.3
broom_0.7.9	Rcpp_1.0.9	scales_1.2.1	backports_1.2.1
jsonlite_1.8.2	fs_1.5.0	hms_1.1.0	stringi_1.7.4
grid_4.2.3	quadprog_1.5-8	cli_3.4.1	tools_4.2.3
sandwich_3.0-1	magrittr_2.0.3	Formula_1.2-4	crayon_1.4.1
pkgconfig_2.0.3	MASS_7.3-54	ellipsis_0.3.2	xml2_1.3.3
reprex_2.0.1	lubridate_1.7.10	rstudioapi_0.13	assertthat_0.2.1
httr_1.4.4	R6_2.5.1	compiler_4.2.3	

Main Empirical Results

Table 1: Case-Fatality Rates

This table was manually created from the data sources specified in the paper.

Figure 1: COVID-19 cases and deaths (reported by May 20, 2021)

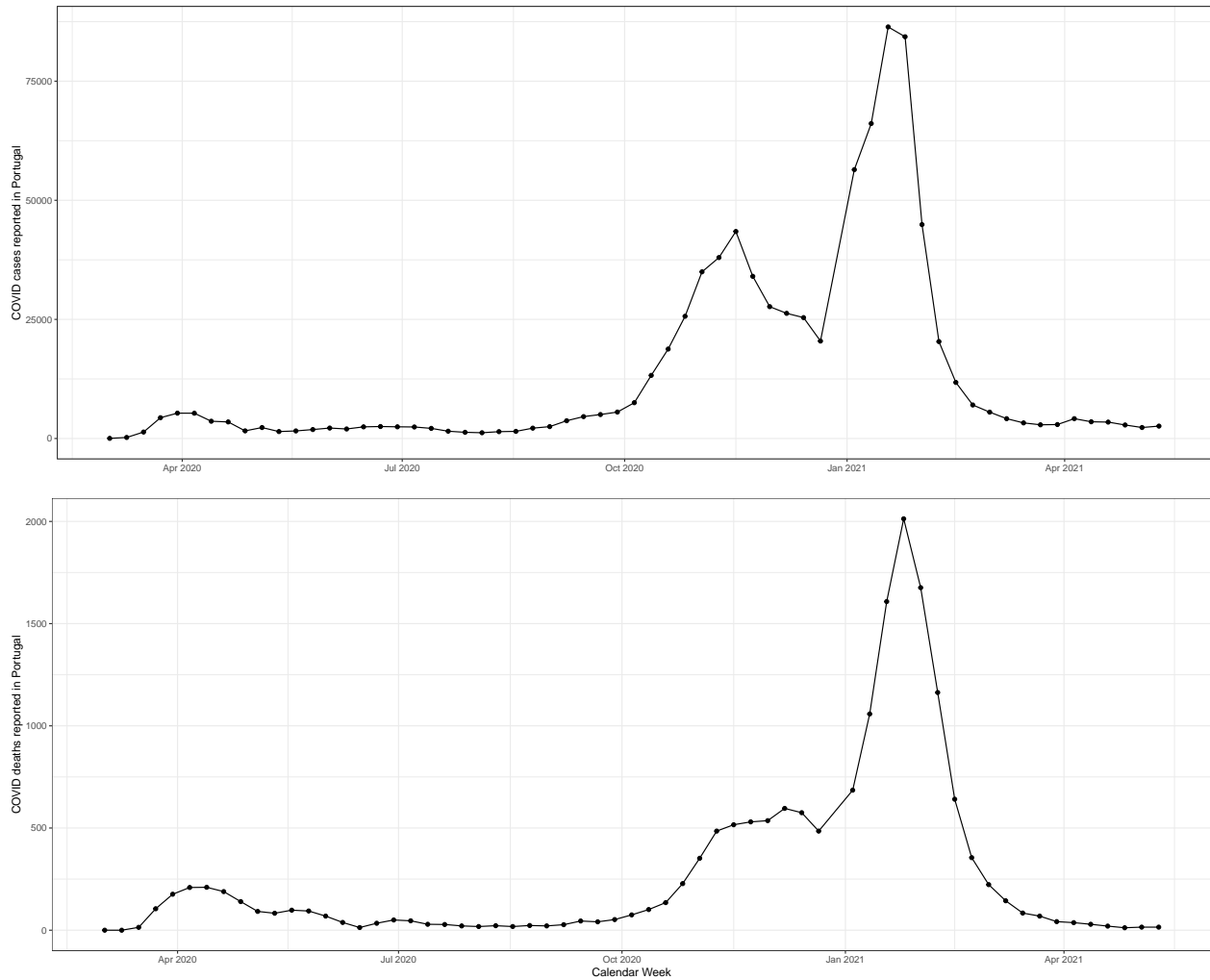


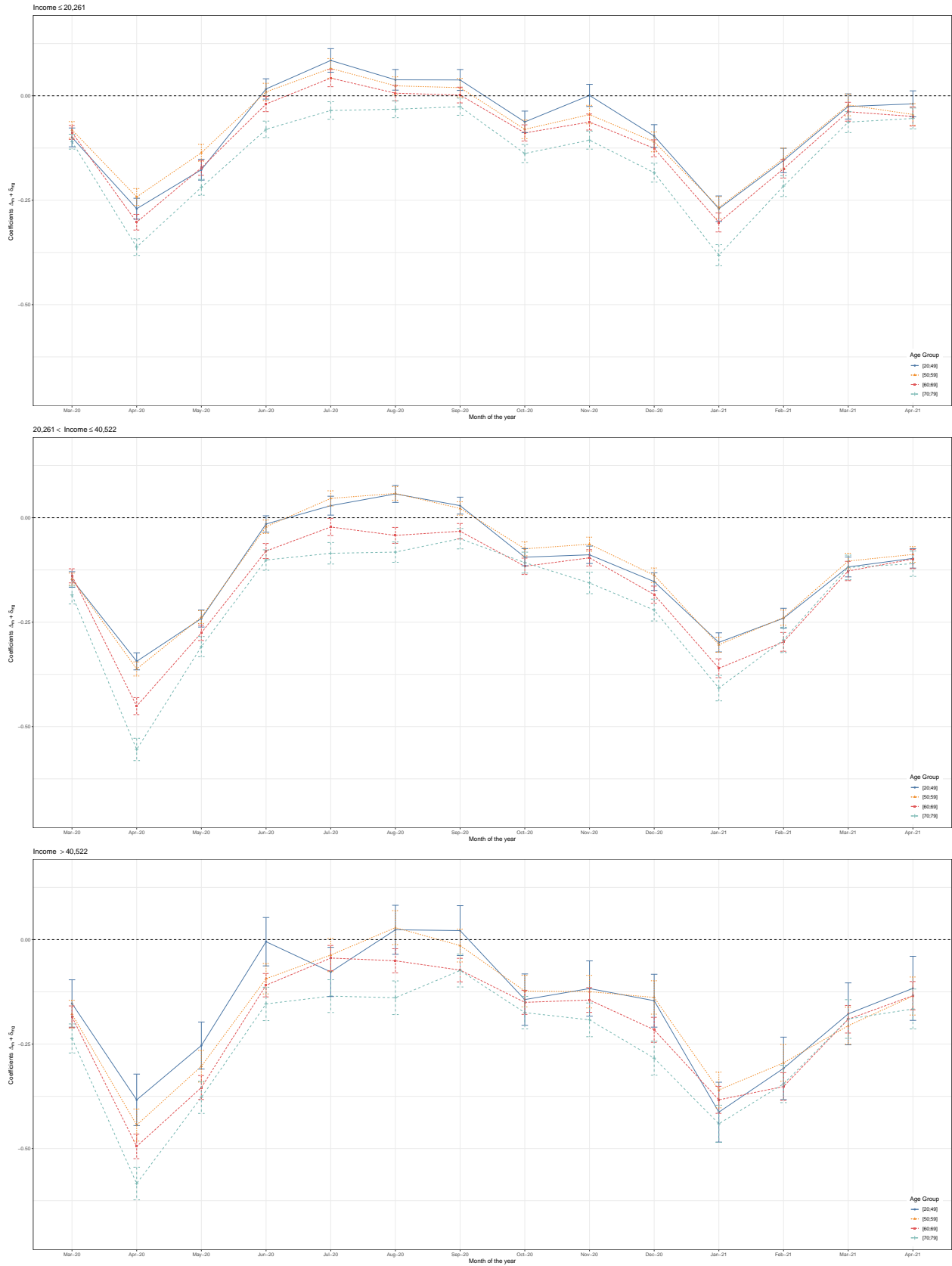
Figure 2: Severity of Covid-19 containment measures over time

This figure was generated in excel. See file 20220501-JPEDataset.containmentindex.wlsx

Figure 3: Changes in expenditures of public servants during the epidemic relative to a counterfactual without Covid.



Figure 4: Changes in expenditures of public servants in different income groups during the epidemic relative to a counterfactual without Covid.



Appendix

Appendix A1 (Empirical Results) - Table 6: Descriptive Statistics, January 2018 to December 2019

All People

```
##
## =====
## Statistic                Mean    St. Dev. Pctl(25)  Median  Pctl(75)
## -----
## Expense p. month (All)   629.3   2,164.7  121.0   284.1   572.6
## Expense p. month (Pharmacy)  17.9    35.4    0.0     4.9    24.0
## -----
## Note: Pctl() denotes the percentile; St. Dev. is the standard deviation
```

Public Servants

```
##
## =====
## Statistic                Mean    St. Dev. Pctl(25)  Median  Pctl(75)
## -----
## Expense p. month (All)   687.8   1,681.0  214.7   423.2   742.6
## Expense p. month (Pharmacy)  25.6    42.3    0.0     11.7   35.6
## -----
## Note: Pctl() denotes the percentile; St. Dev. is the standard deviation
```

Retirees

```
##
## =====
## Statistic                Mean    St. Dev. Pctl(25)  Median  Pctl(75)
## -----
## Expense p. month (All)   437.8   1,696.1  79.5    189.5   417.8
## Expense p. month (Pharmacy)  24.3    41.5    0.0     12.4   34.5
## -----
## Note: Pctl() denotes the percentile; St. Dev. is the standard deviation
```

Appendix A1 (Empirical Results) - Table 7: Distribution of monthly expenses by age and income, January 2018 to December 2019

Age Split (all)

```
##
## =====
##  age_group_2020      n      avg_expenses sd_expenses  Q25  Median.  Q75
## -----
## 1  [20;49]          190,036    642.0        2,051.1   135.3  310.7  591.8
## 2  [50;59]           85,305    680.2        2,405.3   122.3  299.1  616.4
## 3  [60;69]           74,390    619.4        2,269.8    98.6   249.5  547.4
## 4  [70;79]           71,605    436.7         1,839.5    66.5   172.3  397.1
## -----
```

Income Level (all)

```
##
## =====
##          income_group          n      avg_expenses sd_expenses  Q25  Median.  Q75
## -----
## 1  IRS1 - [ 0 ; 7091]    114,295    289.2        1,085.7   43.9   125.4   286.6
## 2  IRS2 - ] 7091 ; 20261] 217,381    477.3        1,425.6  123.5   265.8   490.7
## 3  IRS3 - ]20261 ; 40522] 64,593     913.0        2,093.7  316.8   557.7   922.4
## 4  IRS4 - ]40522 ; 80640] 19,377     1,592.4      3,185.1  474.2   851.1  1,529.6
## 5  IRS5 - ]80640 ; +INF[  5,690     5,404.7     11,044.1 712.6  1,659.2 5,745.6
## -----
```

Age Split (public servants)

```
##
## =====
##  age_group_2020      n      avg_expenses sd_expenses  Q25  Median.  Q75
## -----
## 1  [20;49]           10,007    779.9        1,944.0   291.0  504.7  804.5
## 2  [50;59]           15,367    730.0        1,668.9   255.3  477.5  797.1
## 3  [60;69]           18,837    675.8        1,647.4   197.4  399.7  725.7
## 4  [70;79]           14,387    566.7         1,494.9   147.2  316.0  613.2
## -----
```

Income Level (public servants)

```
##
## =====
##          income_group          n      avg_expenses sd_expenses  Q25  Median.  Q75
## -----
## 1  IRS1 - [ 0 ; 7091]     1,620     251.8         734.0    53.1   126.4   265.4
## 2  IRS2 - ] 7091 ; 20261] 24,250     435.0         1,139.7  140.7   277.4   486.8
## 3  IRS3 - ]20261 ; 40522] 25,651     772.3         1,694.9  306.2   528.2   836.5
## 4  IRS4 - ]40522 ; 80640]  6,194     1,158.4       2,347.2  446.9   762.4  1,221.9
## 5  IRS5 - ]80640 ; +INF[   883      2,224.0       4,582.2  649.2  1,159.2 2,014.7
## -----
```

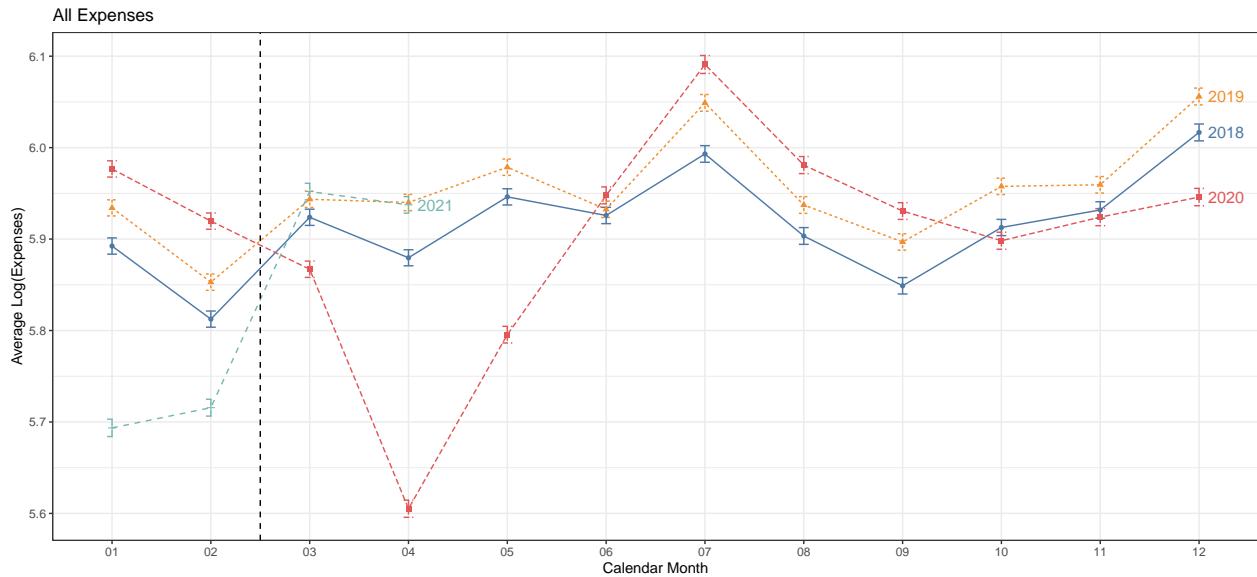
Age Split (retired)

```
##
## =====
##   age_group_2020   n   avg_expenses sd_expenses Q25  Median.  Q75
## -----
## 1   [20;49]       935   232.6       981.6    17.7  78.6   206.3
## 2   [50;59]     3,114   286.4     1,112.0   32.4 108.7  279.1
## 3   [60;69]    26,920   428.7     1,463.5   77.1 197.8  436.2
## 4   [70;79]    63,467   422.6     1,764.6   67.2 172.8  394.3
## -----
```

Income Level (retired)

```
##
## =====
##   income_group      n   avg_expenses sd_expenses Q25  Median.  Q75
## -----
## 1  IRS1 - [ 0 ; 7091] 37,998   161.5       564.3    27.3  79.5   172.1
## 2  IRS2 - ] 7091 ; 20261] 38,328   360.0       941.2   107.1 217.0  402.5
## 3  IRS3 - ]20261 ; 40522] 13,925   741.7     1,685.1  253.2 470.3  803.2
## 4  IRS4 - ]40522 ; 80640] 3,351   1,346.0     2,587.1  436.3 787.5 1,392.8
## 5  IRS5 - ]80640 ; +INF[ 834     5,636.9    12,115.9 732.0 1,749.2 5,819.6
## -----
```

Appendix A1 (Empirical Results) - Figure A1: Average of the logarithm of public servants' monthly expenditures.



Appendix A2 (Seasonality Effects) - Table 8: Contrasting the month trends of years 2018 and 2019

	<i>Dependent variable:</i>				
	<i>Log(Expenses_{it})</i>				
	All	[20;49]	[50;59]	[60;69]	[70;79]
	(1)	(2)	(3)	(4)	(5)
Feb (λ_{Feb})	-0.080*** (0.004)	-0.078*** (0.008)	-0.074*** (0.007)	-0.095*** (0.007)	-0.068*** (0.008)
Mar (λ_{Mar})	0.031*** (0.004)	0.022** (0.008)	0.037*** (0.007)	0.018** (0.006)	0.049*** (0.008)
Apr (λ_{Apr})	-0.013*** (0.004)	-0.005 (0.009)	-0.003 (0.007)	-0.026*** (0.007)	-0.013 (0.008)
May (λ_{May})	0.054*** (0.004)	0.061*** (0.009)	0.061*** (0.007)	0.040*** (0.007)	0.058*** (0.008)
Jun (λ_{Jun})	0.033*** (0.004)	0.043*** (0.009)	0.043*** (0.007)	0.026*** (0.007)	0.026** (0.009)
Jul (λ_{Jul})	0.101*** (0.004)	0.117*** (0.009)	0.117*** (0.007)	0.092*** (0.007)	0.083*** (0.008)
Aug (λ_{Aug})	0.011** (0.004)	0.042*** (0.009)	0.042*** (0.008)	-0.014+ (0.007)	-0.012 (0.009)
Sep (λ_{Sep})	-0.044*** (0.004)	-0.025** (0.009)	-0.005 (0.007)	-0.070*** (0.007)	-0.064*** (0.009)
Oct (λ_{Oct})	0.020*** (0.004)	0.013 (0.009)	0.017* (0.007)	0.004 (0.007)	0.049*** (0.009)
Nov (λ_{Nov})	0.039*** (0.004)	0.032*** (0.009)	0.047*** (0.007)	0.034*** (0.007)	0.042*** (0.009)
Dec (λ_{Dec})	0.124*** (0.004)	0.140*** (0.009)	0.150*** (0.007)	0.111*** (0.007)	0.101*** (0.009)
Y2019 (Λ_{2019})	0.042*** (0.004)	0.064*** (0.009)	0.051*** (0.007)	0.033*** (0.007)	0.027** (0.008)
Y2019 × Feb (ϕ_{Feb})	-0.001 (0.005)	-0.013 (0.011)	-0.002 (0.009)	0.009 (0.009)	-0.005 (0.011)
Y2019 × Mar (ϕ_{Mar})	-0.022*** (0.005)	-0.005 (0.011)	-0.014 (0.009)	-0.017+ (0.009)	-0.048*** (0.011)
Y2019 × Apr (ϕ_{Apr})	0.019*** (0.005)	0.022+ (0.012)	0.018* (0.009)	0.024** (0.009)	0.009 (0.011)
Y2019 × May (ϕ_{May})	-0.009+ (0.005)	-0.004 (0.012)	-0.009 (0.009)	-0.009 (0.009)	-0.013 (0.011)
Y2019 × Jun (ϕ_{Jun})	-0.035*** (0.005)	-0.020+ (0.012)	-0.011 (0.009)	-0.046*** (0.009)	-0.057*** (0.011)
Y2019 × Jul (ϕ_{Jul})	0.014** (0.005)	0.041*** (0.012)	0.022* (0.010)	0.006 (0.009)	-0.001 (0.012)
Y2019 × Aug (ϕ_{Aug})	-0.008 (0.005)	0.001 (0.012)	-0.007 (0.010)	0.0003 (0.010)	-0.026* (0.012)
Y2019 × Sep (ϕ_{Sep})	0.006 (0.005)	0.017 (0.012)	-0.007 (0.010)	0.012 (0.010)	0.005 (0.012)
Y2019 × Oct (ϕ_{Oct})	0.003 (0.005)	-0.005 (0.012)	0.002 (0.010)	0.012 (0.010)	-0.002 (0.012)
Y2019 × Nov (ϕ_{Nov})	-0.014** (0.005)	-0.012 (0.013)	-0.005 (0.010)	-0.018+ (0.010)	-0.021+ (0.012)
Y2019 × Dec (ϕ_{Dec})	-0.002 (0.005)	0.001 (0.012)	0.007 (0.010)	0.003 (0.010)	-0.022+ (0.012)
Constant	5.892*** (0.005)	6.086*** (0.010)	6.010*** (0.008)	5.875*** (0.008)	5.654*** (0.010)
Chi Sq.	59.100	16.853	9.880	28.203	24.052
p-value	0.00000001	0.112	0.541	0.003	0.013
Observations	1,392,370	238,965	366,102	447,699	339,604
R ²	0.003	0.005	0.004	0.003	0.002
Adjusted R ²	0.003	0.005	0.004	0.002	0.002
Residual Std. Error	1.103	0.964	1.026	1.130	1.182

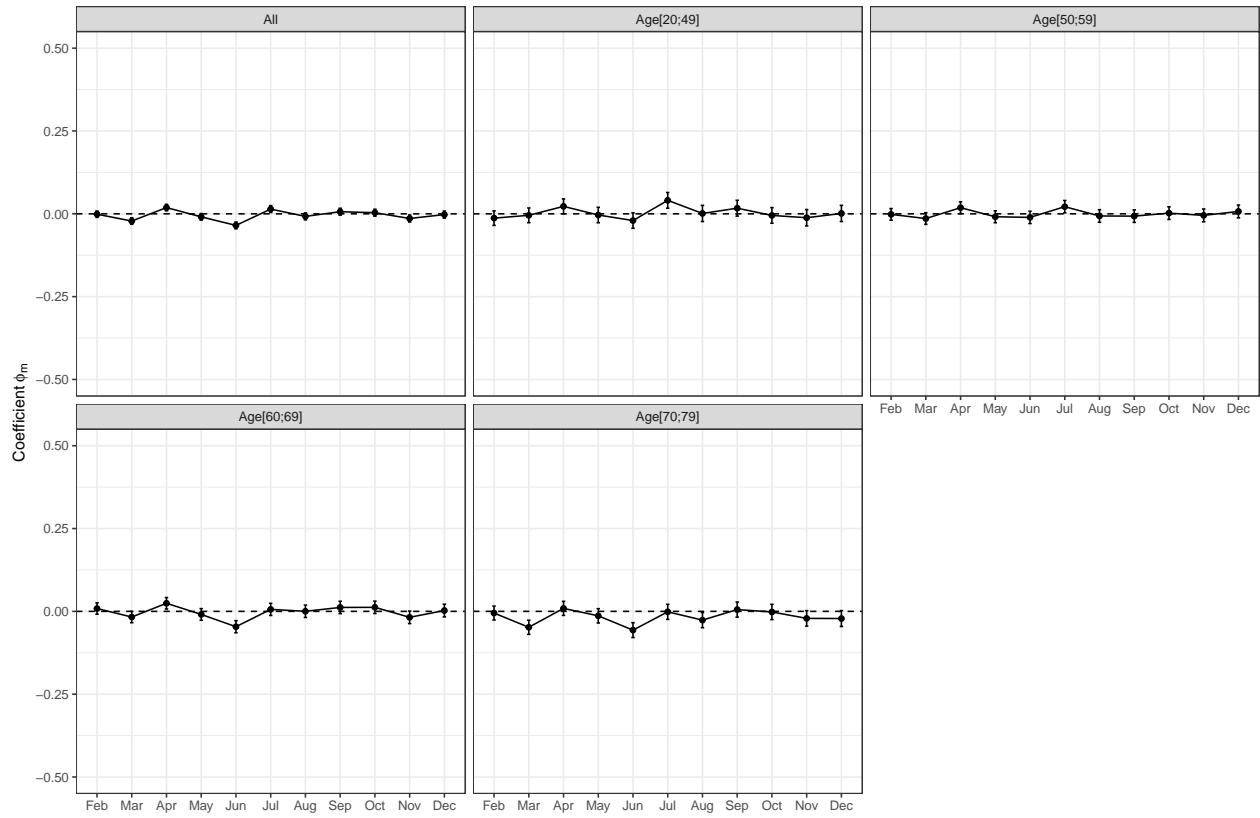
Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

All columns estimated with person fixed effects

Cluster robust standard errors in (); Errors clustered by person

Appendix A2 (Seasonality Effects) - Figure A2: Seasonality effects for different age groups



Appendix A3 (Robustness of empirical results) - Table 9: Impact of age on consumption expenditures

	<i>Dependent variable:</i>			
	<i>log(Expenses_{it})</i>			
	[20; 49]	[50; 59]	[60; 69]	[70; 79]
	(1)	(2)	(3)	(4)
$After_t \times \mathbf{1}\{Month_t = Mar20\}$	-0.124*** (0.008)	-0.124*** (0.006)	-0.123*** (0.006)	-0.158*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Apr20\}$	-0.322*** (0.009)	-0.327*** (0.007)	-0.390*** (0.007)	-0.453*** (0.008)
$After_t \times \mathbf{1}\{Month_t = May20\}$	-0.222*** (0.009)	-0.205*** (0.007)	-0.239*** (0.007)	-0.272*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Jun20\}$	-0.015+ (0.008)	-0.029*** (0.007)	-0.054*** (0.007)	-0.080*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Jul20\}$	0.020* (0.010)	0.037*** (0.008)	0.008 (0.007)	-0.044*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Aug20\}$	0.016+ (0.009)	0.023** (0.007)	-0.012+ (0.007)	-0.031*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Sep20\}$	0.012 (0.009)	-0.004 (0.007)	-0.011+ (0.007)	-0.019* (0.008)
$After_t \times \mathbf{1}\{Month_t = Oct20\}$	-0.071*** (0.009)	-0.069*** (0.007)	-0.107*** (0.007)	-0.158*** (0.009)
$After_t \times \mathbf{1}\{Month_t = Nov20\}$	-0.046*** (0.009)	-0.066*** (0.007)	-0.092*** (0.007)	-0.133*** (0.009)
$After_t \times \mathbf{1}\{Month_t = Dec20\}$	-0.146*** (0.009)	-0.147*** (0.007)	-0.161*** (0.007)	-0.179*** (0.009)
$After_t \times \mathbf{1}\{Month_t = Jan21\}$	-0.293*** (0.009)	-0.290*** (0.007)	-0.342*** (0.007)	-0.400*** (0.009)
$After_t \times \mathbf{1}\{Month_t = Feb21\}$	-0.204*** (0.009)	-0.213*** (0.007)	-0.251*** (0.007)	-0.262*** (0.009)
$After_t \times \mathbf{1}\{Month_t = Mar21\}$	-0.084*** (0.010)	-0.085*** (0.008)	-0.095*** (0.008)	-0.101*** (0.010)
$After_t \times \mathbf{1}\{Month_t = Apr21\}$	-0.076*** (0.010)	-0.079*** (0.008)	-0.080*** (0.008)	-0.082*** (0.010)
$Year_t$	0.110*** (0.027)	0.037 (0.028)	0.045*** (0.012)	0.045*** (0.009)
Month FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Income Group $\times Year_t$ (Ψ_{it})	Yes	Yes	Yes	Yes
Observations	398,086	609,606	744,262	563,048
R ²	0.560	0.618	0.636	0.639
Adjusted R ²	0.548	0.608	0.626	0.630
Residual Std. Error	0.654	0.647	0.697	0.731

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ()

Appendix A3 (Robustness of empirical results) - Table 10: Impact of age and co-morbidity on consumption expenditure

	<i>Dependent variable:</i>			
	<i>log(Expenses_{it})</i>			
	[20; 49]	[50; 59]	[60; 69]	[70; 79]
	(1)	(2)	(3)	(4)
<i>After_t</i> × 1 { <i>Month_t</i> = Mar20}	-0.115*** (0.009)	-0.120*** (0.007)	-0.121*** (0.006)	-0.153*** (0.008)
<i>After_t</i> × 1 { <i>Month_t</i> = Apr20}	-0.305*** (0.009)	-0.316*** (0.007)	-0.379*** (0.007)	-0.442*** (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = May20}	-0.214*** (0.009)	-0.197*** (0.007)	-0.229*** (0.007)	-0.261*** (0.008)
<i>After_t</i> × 1 { <i>Month_t</i> = Jun20}	-0.005 (0.009)	-0.020** (0.007)	-0.043*** (0.007)	-0.069*** (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Jul20}	0.026* (0.010)	0.044*** (0.008)	0.014+ (0.008)	-0.041*** (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Aug20}	0.023* (0.009)	0.032*** (0.007)	-0.004 (0.007)	-0.021* (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Sep20}	0.019* (0.009)	0.002 (0.007)	-0.004 (0.007)	-0.009 (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Oct20}	-0.068*** (0.009)	-0.065*** (0.008)	-0.103*** (0.007)	-0.151*** (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Nov20}	-0.038*** (0.010)	-0.058*** (0.008)	-0.088*** (0.007)	-0.124*** (0.009)
<i>After_t</i> × 1 { <i>Month_t</i> = Dec20}	-0.142*** (0.010)	-0.143*** (0.008)	-0.152*** (0.008)	-0.164*** (0.010)
<i>After_t</i> × 1 { <i>Month_t</i> = Jan21}	-0.287*** (0.010)	-0.291*** (0.008)	-0.343*** (0.008)	-0.401*** (0.010)
<i>After_t</i> × 1 { <i>Month_t</i> = Feb21}	-0.192*** (0.010)	-0.200*** (0.008)	-0.238*** (0.008)	-0.243*** (0.010)
<i>After_t</i> × 1 { <i>Month_t</i> = Mar21}	-0.074*** (0.011)	-0.079*** (0.008)	-0.088*** (0.008)	-0.083*** (0.010)
<i>After_t</i> × 1 { <i>Month_t</i> = Apr21}	-0.068*** (0.011)	-0.075*** (0.008)	-0.076*** (0.008)	-0.066*** (0.010)
<i>After_t</i> × 1 { <i>Month_t</i> = Mar20} × <i>Comorbidity</i>	-0.068*** (0.018)	-0.027+ (0.014)	-0.013 (0.014)	-0.032* (0.016)
<i>After_t</i> × 1 { <i>Month_t</i> = Apr20} × <i>Comorbidity</i>	-0.117*** (0.020)	-0.074*** (0.016)	-0.080*** (0.016)	-0.068*** (0.019)
<i>After_t</i> × 1 { <i>Month_t</i> = May20} × <i>Comorbidity</i>	-0.062** (0.020)	-0.060*** (0.015)	-0.070*** (0.015)	-0.069*** (0.017)
<i>After_t</i> × 1 { <i>Month_t</i> = Jun20} × <i>Comorbidity</i>	-0.068*** (0.019)	-0.061*** (0.015)	-0.079*** (0.015)	-0.065*** (0.017)
<i>After_t</i> × 1 { <i>Month_t</i> = Jul20} × <i>Comorbidity</i>	-0.044* (0.022)	-0.048** (0.018)	-0.041* (0.017)	-0.023 (0.019)
<i>After_t</i> × 1 { <i>Month_t</i> = Aug20} × <i>Comorbidity</i>	-0.050** (0.019)	-0.062*** (0.016)	-0.058*** (0.016)	-0.063*** (0.018)
<i>After_t</i> × 1 { <i>Month_t</i> = Sep20} × <i>Comorbidity</i>	-0.049* (0.019)	-0.043** (0.016)	-0.050*** (0.015)	-0.062*** (0.018)
<i>After_t</i> × 1 { <i>Month_t</i> = Oct20} × <i>Comorbidity</i>	-0.026 (0.020)	-0.029+ (0.016)	-0.028+ (0.015)	-0.045* (0.018)
<i>After_t</i> × 1 { <i>Month_t</i> = Nov20} × <i>Comorbidity</i>	-0.054** (0.020)	-0.055*** (0.016)	-0.027+ (0.016)	-0.053** (0.018)
<i>After_t</i> × 1 { <i>Month_t</i> = Dec20} × <i>Comorbidity</i>	-0.032 (0.020)	-0.026 (0.017)	-0.060*** (0.016)	-0.096*** (0.019)
<i>After_t</i> × 1 { <i>Month_t</i> = Jan21} × <i>Comorbidity</i>	-0.042* (0.020)	0.007 (0.016)	0.004 (0.016)	0.004 (0.019)
<i>After_t</i> × 1 { <i>Month_t</i> = Feb21} × <i>Comorbidity</i>	-0.087*** (0.021)	-0.091*** (0.017)	-0.089*** (0.017)	-0.116*** (0.020)
<i>After_t</i> × 1 { <i>Month_t</i> = Mar21} × <i>Comorbidity</i>	-0.068*** (0.020)	-0.039* (0.016)	-0.053*** (0.016)	-0.113*** (0.019)
<i>After_t</i> × 1 { <i>Month_t</i> = Apr21} × <i>Comorbidity</i>	-0.058** (0.019)	-0.033* (0.016)	-0.026 (0.016)	-0.099*** (0.020)
Month FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Income Group × <i>Year_t</i> (Ψ_{it})	Yes	Yes	Yes	Yes
Observations	398,086	609,606	744,262	563,048
R ²	0.560	0.618	0.636	0.639
Adjusted R ²	0.548	0.608	0.626	0.630
Residual Std. Error	0.654	0.647	0.697	0.731

Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
FE is the fixed effects estimator
Standard Errors clustered by person in ()

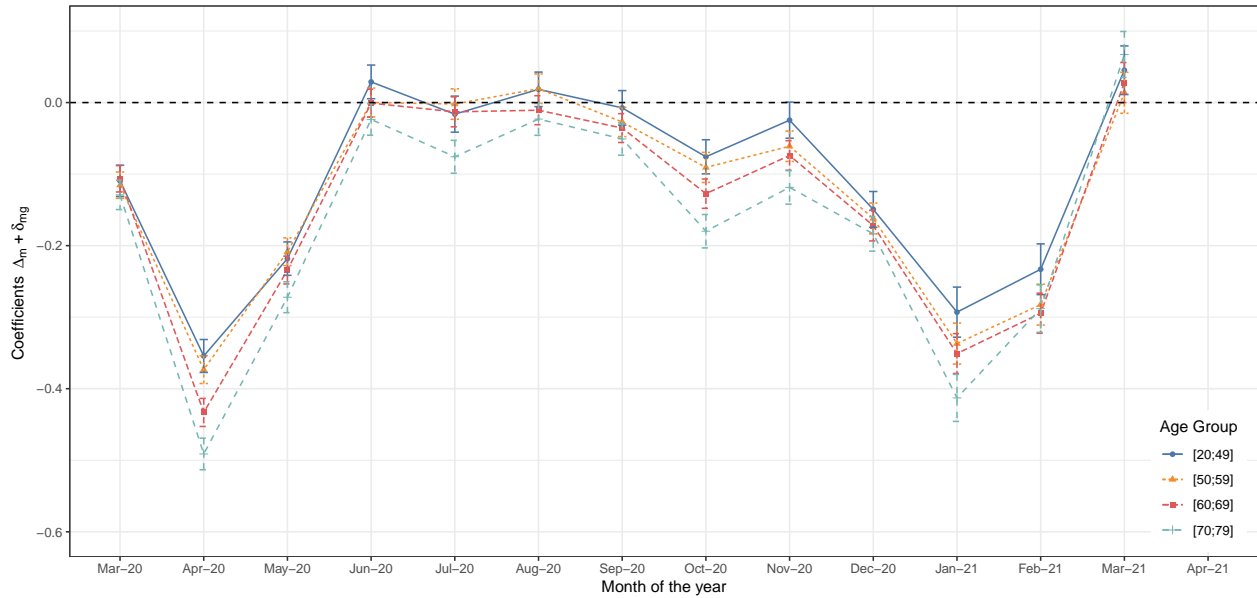
Appendix A3 (Robustness of empirical results) - Table 11: Impact of age heterogeneity on spending for retirees

	<i>Dependent variable:</i>			
	<i>log(Expense_{it})</i>			
	(1)	(2)	(3)	(4)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Mar20,<60} + \delta_{Mar20,<60})$	-0.018 (0.014)	-0.043** (0.015)	-0.043** (0.015)	-0.043** (0.015)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Mar20,\geq 60} + \delta_{Mar20,\geq 60})$	-0.086*** (0.003)	-0.085*** (0.003)	-0.085*** (0.003)	-0.085*** (0.003)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Apr20,<60} + \delta_{Apr20,<60})$	-0.192*** (0.016)	-0.216*** (0.016)	-0.216*** (0.016)	-0.216*** (0.016)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Apr20,\geq 60} + \delta_{Apr20,\geq 60})$	-0.321*** (0.003)	-0.320*** (0.003)	-0.320*** (0.003)	-0.320*** (0.003)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{May20,<60} + \delta_{May20,<60})$	-0.126*** (0.014)	-0.151*** (0.015)	-0.151*** (0.015)	-0.151*** (0.015)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{May20,\geq 60} + \delta_{May20,\geq 60})$	-0.199*** (0.003)	-0.198*** (0.003)	-0.198*** (0.003)	-0.198*** (0.003)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Jun20,<60} + \delta_{Jun20,<60})$	0.013 (0.015)	-0.012 (0.016)	-0.012 (0.016)	-0.012 (0.016)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Jun20,\geq 60} + \delta_{Jun20,\geq 60})$	-0.047*** (0.003)	-0.046*** (0.003)	-0.046*** (0.003)	-0.046*** (0.003)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Jul20,<60} + \delta_{Jul20,<60})$	0.023 (0.016)	-0.002 (0.017)	-0.002 (0.017)	-0.002 (0.017)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Jul20,\geq 60} + \delta_{Jul20,\geq 60})$	-0.037*** (0.003)	-0.036*** (0.003)	-0.036*** (0.003)	-0.036*** (0.003)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Aug20,<60} + \delta_{Aug20,<60})$	0.058*** (0.016)	0.033* (0.016)	0.033* (0.016)	0.033* (0.016)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Aug20,\geq 60} + \delta_{Aug20,\geq 60})$	-0.022*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Sep20,<60} + \delta_{Sep20,<60})$	0.022 (0.015)	-0.003 (0.016)	-0.003 (0.016)	-0.003 (0.016)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Sep20,\geq 60} + \delta_{Sep20,\geq 60})$	-0.024*** (0.004)	-0.023*** (0.004)	-0.023*** (0.004)	-0.023*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Oct20,<60} + \delta_{Oct20,<60})$	-0.076*** (0.016)	-0.101*** (0.017)	-0.101*** (0.017)	-0.101*** (0.017)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Oct20,\geq 60} + \delta_{Oct20,\geq 60})$	-0.151*** (0.004)	-0.149*** (0.004)	-0.149*** (0.004)	-0.149*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Nov20,<60} + \delta_{Nov20,<60})$	-0.013 (0.016)	-0.038* (0.016)	-0.038* (0.016)	-0.038* (0.016)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Nov20,\geq 60} + \delta_{Nov20,\geq 60})$	-0.106*** (0.004)	-0.105*** (0.004)	-0.105*** (0.004)	-0.105*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Dec20,<60} + \delta_{Dec20,<60})$	-0.103*** (0.018)	-0.128*** (0.018)	-0.128*** (0.018)	-0.128*** (0.018)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Dec20,\geq 60} + \delta_{Dec20,\geq 60})$	-0.143*** (0.004)	-0.142*** (0.004)	-0.142*** (0.004)	-0.142*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Jan21\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Jan21,<60} + \delta_{Jan21,<60})$	-0.188*** (0.017)	-0.230*** (0.020)	-0.230*** (0.020)	-0.230*** (0.020)
$After_t \times \mathbf{1}\{Month_t = Jan21\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Jan21,\geq 60} + \delta_{Jan21,\geq 60})$	-0.377*** (0.004)	-0.375*** (0.004)	-0.374*** (0.004)	-0.374*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Feb21\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Feb21,<60} + \delta_{Feb21,<60})$	-0.066*** (0.016)	-0.108*** (0.020)	-0.109*** (0.020)	-0.109*** (0.020)
$After_t \times \mathbf{1}\{Month_t = Feb21\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Feb21,\geq 60} + \delta_{Feb21,\geq 60})$	-0.201*** (0.004)	-0.199*** (0.004)	-0.199*** (0.004)	-0.199*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Mar21\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Mar21,<60} + \delta_{Mar21,<60})$	0.019 (0.018)	-0.023 (0.021)	-0.023 (0.021)	-0.023 (0.021)
$After_t \times \mathbf{1}\{Month_t = Mar21\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Mar21,\geq 60} + \delta_{Mar21,\geq 60})$	-0.055*** (0.004)	-0.053*** (0.004)	-0.053*** (0.004)	-0.053*** (0.004)
$After_t \times \mathbf{1}\{Month_t = Apr21\} \times \mathbf{1}\{Age_i < 60\}(\Delta_{Apr21,<60} + \delta_{Apr21,<60})$	0.041* (0.017)	-0.002 (0.020)	-0.002 (0.020)	-0.002 (0.020)
$After_t \times \mathbf{1}\{Month_t = Apr21\} \times \mathbf{1}\{Age_i \geq 60\}(\Delta_{Apr21,\geq 60} + \delta_{Apr21,\geq 60})$	-0.044*** (0.004)	-0.043*** (0.004)	-0.043*** (0.004)	-0.043*** (0.004)
Month FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Age Group \times Year _t (Ψ_{it})	No	Yes	Yes	Yes
Income Group \times Year _t (Ψ_{it})	No	No	Yes	Yes
Age Group \times Income Group \times Year _t (Ψ_{it})	No	No	No	Yes
Observations	3,583,123	3,583,123	3,583,123	3,583,123
R ²	0.689	0.689	0.689	0.689
Adjusted R ²	0.680	0.680	0.681	0.681
Residual Std. Error	0.776	0.776	0.775	0.775

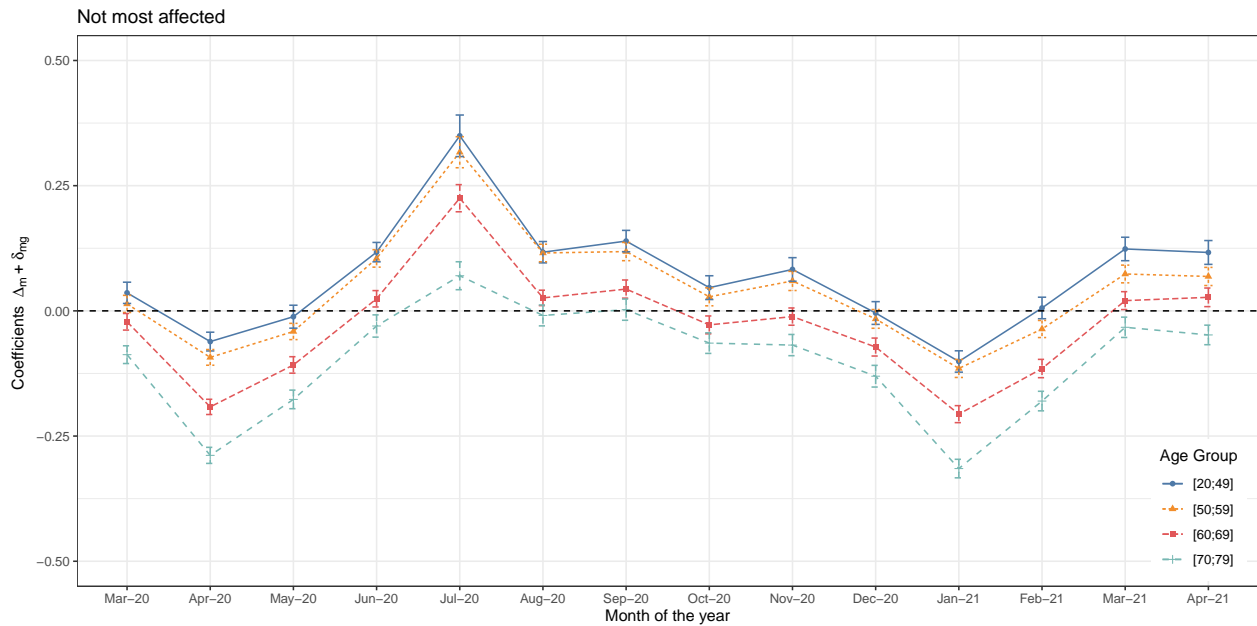
Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ()

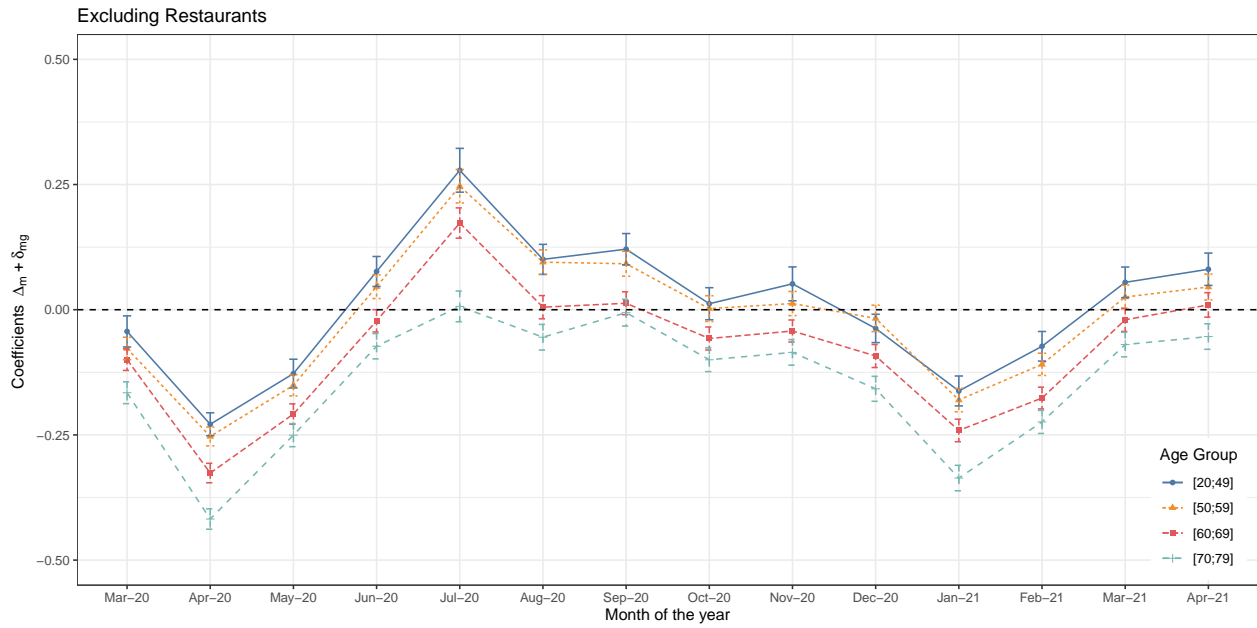
Appendix A3 (Robustness of empirical results) - Figure A3: Estimation results for growth rate specification.



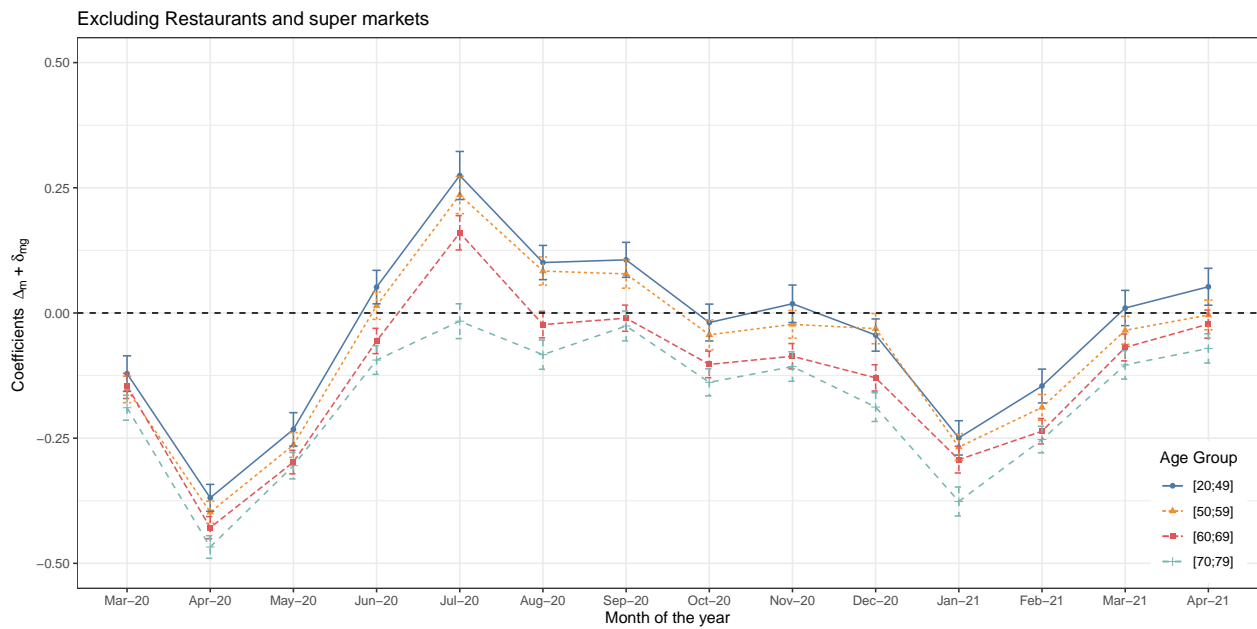
Appendix A3 (Robustness of empirical results) - Figure A4: Changes in expenditures of public servants in the sectors least affected by lockdowns during the epidemic relative to a counterfactual without Covid



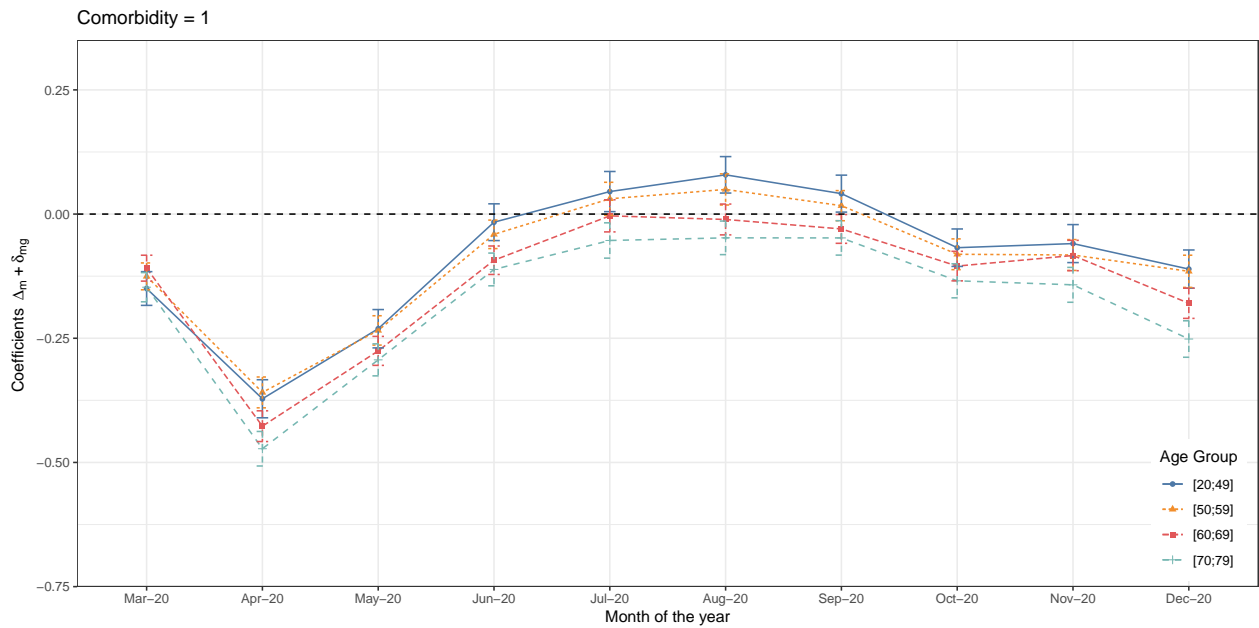
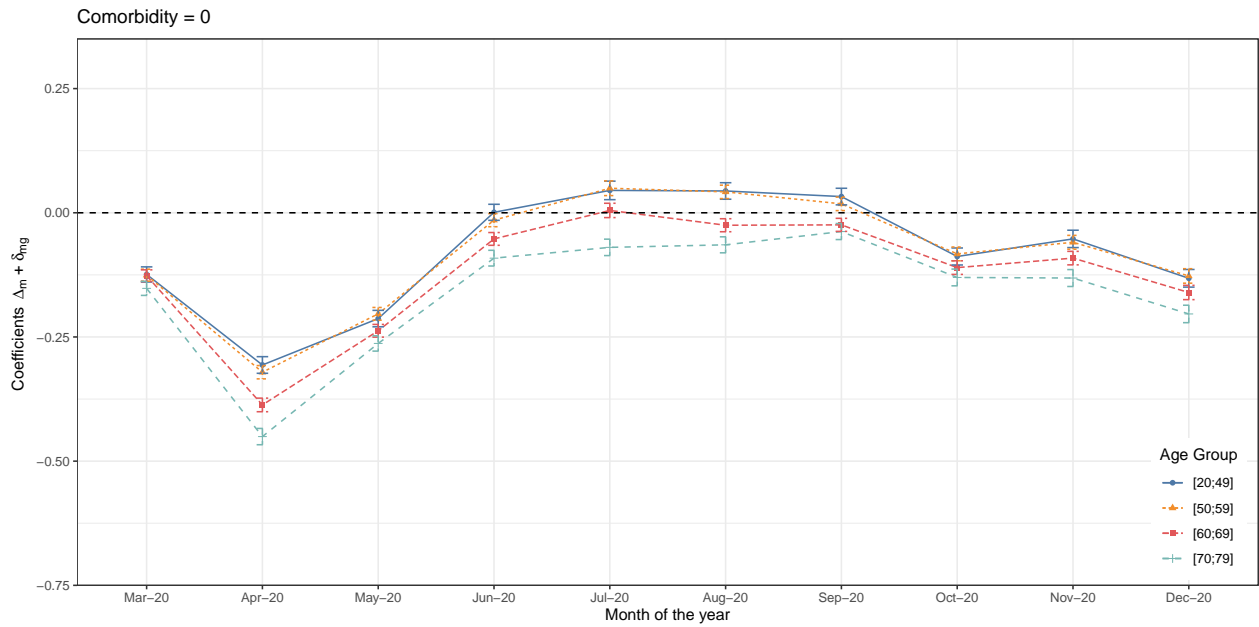
Appendix A3 (Robustness of empirical results) - Figure A5: Estimation results excluding restaurant expenditures



Appendix A3 (Robustness of empirical results) - Figure A6: Estimation results excluding restaurant and super markets expenditures



Appendix A4 (The effect of comorbidity) - Figure A7: Changes in expenditures of public servants in different income groups during the epidemic relative to a counterfactual without covid for people with and without comorbidity



Appendix A5 (Empirical Results for the analytical model) - Table 12: Impact of age on expenditures

	<i>Dependent variable:</i>			
	<i>log(Expense_{it})</i>			
	FE (1)	FE (2)	FE (3)	FE (4)
$After_t \times \mathbf{1}\{Month_t = Mar20\}(\Delta_{Mar20})$	-0.101*** (0.005)	-0.127*** (0.005)	-0.127*** (0.005)	-0.127*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Apr20\}(\Delta_{Apr20})$	-0.297*** (0.005)	-0.322*** (0.005)	-0.322*** (0.005)	-0.322*** (0.005)
$After_t \times \mathbf{1}\{Month_t = May20\}(\Delta_{May20})$	-0.185*** (0.005)	-0.211*** (0.005)	-0.211*** (0.005)	-0.211*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Jun20\}(\Delta_{Jun20})$	0.014** (0.005)	-0.012* (0.005)	-0.012* (0.005)	-0.012* (0.005)
$After_t \times \mathbf{1}\{Month_t = Jul20\}(\Delta_{Jul20})$	0.072*** (0.006)	0.046*** (0.006)	0.046*** (0.006)	0.046*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Aug20\}(\Delta_{Aug20})$	0.071*** (0.005)	0.046*** (0.005)	0.046*** (0.005)	0.046*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Sep20\}(\Delta_{Sep20})$	0.050*** (0.005)	0.024*** (0.005)	0.024*** (0.005)	0.024*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Oct20\}(\Delta_{Oct20})$	-0.058*** (0.005)	-0.084*** (0.005)	-0.084*** (0.005)	-0.084*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Nov20\}(\Delta_{Nov20})$	-0.033*** (0.005)	-0.059*** (0.005)	-0.059*** (0.005)	-0.059*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Dec20\}(\Delta_{Dec20})$	-0.101*** (0.005)	-0.127*** (0.005)	-0.127*** (0.005)	-0.127*** (0.005)
$After_t \times \mathbf{1}\{Month_t = Jan21\}(\Delta_{Jan21})$	-0.252*** (0.005)	-0.296*** (0.006)	-0.296*** (0.006)	-0.296*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Feb21\}(\Delta_{Feb21})$	-0.168*** (0.005)	-0.212*** (0.006)	-0.212*** (0.006)	-0.212*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Mar21\}(\Delta_{Mar21})$	-0.039*** (0.006)	-0.083*** (0.006)	-0.083*** (0.006)	-0.083*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Apr21\}(\Delta_{Apr21})$	-0.028*** (0.006)	-0.072*** (0.006)	-0.072*** (0.006)	-0.072*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Mar20, \geq 60})$	-0.055*** (0.006)	-0.009 (0.006)	-0.009 (0.006)	-0.009 (0.006)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Apr20, \geq 60})$	-0.142*** (0.007)	-0.097*** (0.007)	-0.097*** (0.007)	-0.097*** (0.007)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{May20, \geq 60})$	-0.088*** (0.006)	-0.043*** (0.006)	-0.043*** (0.006)	-0.043*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Jun20, \geq 60})$	-0.108*** (0.006)	-0.062*** (0.006)	-0.062*** (0.006)	-0.062*** (0.006)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Jul20, \geq 60})$	-0.118*** (0.007)	-0.073*** (0.007)	-0.073*** (0.007)	-0.073*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Aug20, \geq 60})$	-0.131*** (0.006)	-0.086*** (0.007)	-0.086*** (0.007)	-0.086*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Sep20, \geq 60})$	-0.101*** (0.006)	-0.056*** (0.007)	-0.056*** (0.007)	-0.056*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Oct20, \geq 60})$	-0.081*** (0.006)	-0.035*** (0.007)	-0.035*** (0.007)	-0.035*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Nov20, \geq 60})$	-0.095*** (0.007)	-0.050*** (0.007)	-0.050*** (0.007)	-0.050*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Dec20, \geq 60})$	-0.103*** (0.007)	-0.057*** (0.007)	-0.057*** (0.007)	-0.057*** (0.007)
$After_t \times \mathbf{1}\{Month_t = Jan21\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Jan21, \geq 60})$	-0.145*** (0.007)	-0.067*** (0.008)	-0.067*** (0.008)	-0.067*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Feb21\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Feb21, \geq 60})$	-0.120*** (0.007)	-0.042*** (0.008)	-0.042*** (0.008)	-0.042*** (0.008)
$After_t \times \mathbf{1}\{Month_t = Mar21\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Mar21, \geq 60})$	-0.093*** (0.006)	-0.015 ⁺ (0.008)	-0.015 ⁺ (0.008)	-0.015 ⁺ (0.008)
$After_t \times \mathbf{1}\{Month_t = Apr21\} \times \mathbf{1}\{Age_i \geq 60\}(\delta_{Apr21, \geq 60})$	-0.091*** (0.006)	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)
Month FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Age Group \times Year _t (Ψ_{it})	No	Yes	Yes	Yes
Income Group \times Year _t (Ψ_{it})	No	No	Yes	Yes
Age Group \times Income Group \times Year _t (Ψ_{it})	No	No	No	Yes
Observations	2,315,002	2,315,002	2,315,002	2,315,002
R ²	0.633	0.633	0.633	0.633
Adjusted R ²	0.623	0.623	0.624	0.624
Residual Std. Error	0.686	0.686	0.686	0.686

Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ()

Appendix A6 (Regression tables used for the figures) - Table 13: Impact of age on consumption expenditures

	<i>Dependent variable:</i>				
	<i>log(Expenses_{it})</i>				
	(1)	(2)	(3)	(4)	(5)
<i>After_t</i>	-0.138*** (0.002)				
<i>After_t</i> × 1 { <i>Age_i</i> = [20; 49]}		-0.067*** (0.004)	-0.103*** (0.005)	-0.103*** (0.005)	-0.103*** (0.005)
<i>After_t</i> × 1 { <i>Age_i</i> = [50; 59]}		-0.087*** (0.004)	-0.107*** (0.004)	-0.107*** (0.004)	-0.107*** (0.004)
<i>After_t</i> × 1 { <i>Age_i</i> = [60; 69]}		-0.154*** (0.003)	-0.146*** (0.004)	-0.146*** (0.004)	-0.146*** (0.004)
<i>After_t</i> × 1 { <i>Age_i</i> = [70; 79]}		-0.223*** (0.004)	-0.187*** (0.005)	-0.187*** (0.005)	-0.187*** (0.005)
1 { <i>Month_t</i> = Feb}	-0.050*** (0.002)	-0.050*** (0.002)	-0.050*** (0.002)	-0.050*** (0.002)	-0.050*** (0.002)
1 { <i>Month_t</i> = Mar}	0.081*** (0.002)	0.081*** (0.002)	0.081*** (0.002)	0.081*** (0.002)	0.081*** (0.002)
1 { <i>Month_t</i> = Apr}	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)
1 { <i>Month_t</i> = May}	0.065*** (0.002)	0.065*** (0.002)	0.065*** (0.002)	0.065*** (0.002)	0.065*** (0.002)
1 { <i>Month_t</i> = Jun}	0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)
1 { <i>Month_t</i> = Jul}	0.203*** (0.002)	0.203*** (0.002)	0.203*** (0.002)	0.203*** (0.002)	0.203*** (0.002)
1 { <i>Month_t</i> = Aug}	0.098*** (0.003)	0.098*** (0.003)	0.098*** (0.003)	0.098*** (0.003)	0.098*** (0.003)
1 { <i>Month_t</i> = Sep}	0.048*** (0.002)	0.048*** (0.002)	0.048*** (0.002)	0.048*** (0.002)	0.048*** (0.002)
1 { <i>Month_t</i> = Oct}	0.079*** (0.002)	0.080*** (0.002)	0.080*** (0.002)	0.079*** (0.002)	0.079*** (0.002)
1 { <i>Month_t</i> = Nov}	0.095*** (0.002)	0.095*** (0.002)	0.095*** (0.002)	0.095*** (0.002)	0.095*** (0.002)
1 { <i>Month_t</i> = Dec}	0.161*** (0.003)	0.161*** (0.003)	0.161*** (0.003)	0.161*** (0.003)	0.161*** (0.003)
<i>Year_t</i>	0.041*** (0.001)	0.041*** (0.001)	0.062*** (0.002)	0.088*** (0.007)	0.105*** (0.027)
<i>Year_t</i> × 1 { <i>Age_i</i> = [50; 59]}			-0.009** (0.003)	-0.008* (0.003)	-0.071+ (0.038)
<i>Year_t</i> × 1 { <i>Age_i</i> = [60; 69]}			-0.026*** (0.003)	-0.026*** (0.003)	-0.056+ (0.029)
<i>Year_t</i> × 1 { <i>Age_i</i> = [70; 79]}			-0.043*** (0.003)	-0.046*** (0.003)	-0.050+ (0.028)
<i>Year_t</i> × 1 { <i>Income_i</i> =]7, 091; 20, 261]}				-0.007 (0.007)	-0.023 (0.027)
<i>Year_t</i> × 1 { <i>Income_i</i> =]20, 261; 40, 522]}				-0.036*** (0.007)	-0.054* (0.027)
<i>Year_t</i> × 1 { <i>Income_i</i> =]40, 522; 80, 640]}				-0.054*** (0.007)	-0.071* (0.028)
<i>Year_t</i> × 1 { <i>Income_i</i> => 80, 640}				-0.070*** (0.010)	-0.167*** (0.036)
<i>Year_t</i> × 1 { <i>Age_i</i> = [50; 59]} × 1 { <i>Income_i</i> =]7, 091; 20, 261]}					0.064 (0.039)
<i>Year_t</i> × 1 { <i>Age_i</i> = [60; 69]} × 1 { <i>Income_i</i> =]7, 091; 20, 261]}					0.028 (0.030)
<i>Year_t</i> × 1 { <i>Age_i</i> = [70; 79]} × 1 { <i>Income_i</i> =]7, 091; 20, 261]}					0.0002 (0.029)
<i>Year_t</i> × 1 { <i>Age_i</i> = [50; 59]} × 1 { <i>Income_i</i> =]20, 261; 40, 522]}					0.065+ (0.039)
<i>Year_t</i> × 1 { <i>Age_i</i> = [60; 69]} × 1 { <i>Income_i</i> =]20, 261; 40, 522]}					0.033 (0.030)
<i>Year_t</i> × 1 { <i>Age_i</i> = [70; 79]} × 1 { <i>Income_i</i> =]20, 261; 40, 522]}					0.001 (0.029)
<i>Year_t</i> × 1 { <i>Age_i</i> = [50; 59]} × 1 { <i>Income_i</i> =]40, 522; 80, 640]}					0.058 (0.040)
<i>Year_t</i> × 1 { <i>Age_i</i> = [60; 69]} × 1 { <i>Income_i</i> =]40, 522; 80, 640]}					0.032 (0.031)
<i>Year_t</i> × 1 { <i>Age_i</i> = [70; 79]} × 1 { <i>Income_i</i> =]40, 522; 80, 640]}					0.005 (0.030)
<i>Year_t</i> × 1 { <i>Age_i</i> = [50; 59]} × 1 { <i>Income_i</i> > 80, 640}					0.145** (0.051)
<i>Year_t</i> × 1 { <i>Age_i</i> = [60; 69]} × 1 { <i>Income_i</i> > 80, 640}					0.106** (0.039)
<i>Year_t</i> × 1 { <i>Age_i</i> = [70; 79]} × 1 { <i>Income_i</i> > 80, 640}					0.108** (0.040)
Individual FE	Yes	Yes	Yes	Yes	Yes
Age Group × <i>Year_t</i> (Ψ_{it})	No	Yes	Yes	Yes	Yes
Income Group × <i>Year_t</i> (Ψ_{it})	No	No	No	Yes	Yes
Age Group × Income Group × <i>Year_t</i> (Ψ_{it})	No	No	No	No	Yes
Observations	2,315,002	2,315,002	2,315,002	2,315,002	2,315,002
R ²	0.629	0.630	0.630	0.630	0.630
Adjusted R ²	0.620	0.620	0.621	0.621	0.621
Residual Std. Error	0.689	0.689	0.689	0.688	0.688

Note:

*p<0.1; **p<0.05; ***p<0.01
+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ()

Appendix A6 (Regression tables used for the figures) - Table 14: Impact of age on consumption expenditure (main plot results)

	Dependent variable:			
	$\log(Expense_{it})$			
	(1)	(2)	(3)	(4)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Mar20,[20;49]} + \delta_{Mar20,[20;49]})$	-0.094*** (0.007)	-0.128*** (0.007)	-0.128*** (0.007)	-0.128*** (0.007)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Mar20,[50;59]} + \delta_{Mar20,[50;59]})$	-0.105*** (0.006)	-0.126*** (0.006)	-0.126*** (0.006)	-0.126*** (0.006)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Mar20,[60;69]} + \delta_{Mar20,[60;69]})$	-0.131*** (0.005)	-0.124*** (0.006)	-0.124*** (0.006)	-0.124*** (0.006)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Mar20,[70;79]} + \delta_{Mar20,[70;79]})$	-0.188*** (0.006)	-0.151*** (0.007)	-0.151*** (0.007)	-0.151*** (0.007)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Apr20,[20;49]} + \delta_{Apr20,[20;49]})$	-0.282*** (0.008)	-0.316*** (0.008)	-0.316*** (0.008)	-0.316*** (0.008)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Apr20,[50;59]} + \delta_{Apr20,[50;59]})$	-0.306*** (0.006)	-0.326*** (0.006)	-0.326*** (0.006)	-0.326*** (0.006)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Apr20,[60;69]} + \delta_{Apr20,[60;69]})$	-0.399*** (0.006)	-0.393*** (0.006)	-0.393*** (0.006)	-0.393*** (0.006)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Apr20,[70;79]} + \delta_{Apr20,[70;79]})$	-0.491*** (0.007)	-0.454*** (0.008)	-0.454*** (0.008)	-0.454*** (0.008)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [20; 49]\}(\Delta_{May20,[20;49]} + \delta_{May20,[20;49]})$	-0.182*** (0.008)	-0.216*** (0.008)	-0.216*** (0.008)	-0.216*** (0.008)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [50; 59]\}(\Delta_{May20,[50;59]} + \delta_{May20,[50;59]})$	-0.187*** (0.006)	-0.208*** (0.006)	-0.208*** (0.006)	-0.208*** (0.006)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [60; 69]\}(\Delta_{May20,[60;69]} + \delta_{May20,[60;69]})$	-0.250*** (0.006)	-0.243*** (0.006)	-0.243*** (0.006)	-0.243*** (0.006)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [70; 79]\}(\Delta_{May20,[70;79]} + \delta_{May20,[70;79]})$	-0.305*** (0.007)	-0.268*** (0.007)	-0.268*** (0.007)	-0.268*** (0.007)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jun20,[20;49]} + \delta_{Jun20,[20;49]})$	0.032*** (0.007)	-0.001 (0.008)	-0.001 (0.008)	-0.001 (0.008)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jun20,[50;59]} + \delta_{Jun20,[50;59]})$	0.002 (0.006)	-0.019** (0.006)	-0.018** (0.006)	-0.018** (0.006)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jun20,[60;69]} + \delta_{Jun20,[60;69]})$	-0.065*** (0.006)	-0.058*** (0.006)	-0.058*** (0.006)	-0.058*** (0.006)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jun20,[70;79]} + \delta_{Jun20,[70;79]})$	-0.132*** (0.007)	-0.095*** (0.007)	-0.095*** (0.007)	-0.095*** (0.007)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jul20,[20;49]} + \delta_{Jul20,[20;49]})$	0.079*** (0.008)	0.045*** (0.009)	0.045*** (0.009)	0.045*** (0.009)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jul20,[50;59]} + \delta_{Jul20,[50;59]})$	0.067*** (0.007)	0.047*** (0.007)	0.047*** (0.007)	0.047*** (0.007)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jul20,[60;69]} + \delta_{Jul20,[60;69]})$	-0.003 (0.007)	0.003 (0.007)	0.003 (0.007)	0.003 (0.007)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jul20,[70;79]} + \delta_{Jul20,[70;79]})$	-0.104*** (0.007)	-0.067*** (0.008)	-0.067*** (0.008)	-0.067*** (0.008)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Aug20,[20;49]} + \delta_{Aug20,[20;49]})$	0.083*** (0.007)	0.049*** (0.008)	0.049*** (0.008)	0.049*** (0.008)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Aug20,[50;59]} + \delta_{Aug20,[50;59]})$	0.064*** (0.006)	0.043*** (0.006)	0.043*** (0.006)	0.043*** (0.006)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Aug20,[60;69]} + \delta_{Aug20,[60;69]})$	-0.030*** (0.006)	-0.023*** (0.006)	-0.023*** (0.006)	-0.023*** (0.006)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Aug20,[70;79]} + \delta_{Aug20,[70;79]})$	-0.099*** (0.007)	-0.062*** (0.007)	-0.062*** (0.007)	-0.062*** (0.007)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Sep20,[20;49]} + \delta_{Sep20,[20;49]})$	0.067*** (0.008)	0.034*** (0.008)	0.034*** (0.008)	0.034*** (0.008)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Sep20,[50;59]} + \delta_{Sep20,[50;59]})$	0.038*** (0.006)	0.018** (0.006)	0.018** (0.006)	0.018** (0.006)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Sep20,[60;69]} + \delta_{Sep20,[60;69]})$	-0.032*** (0.006)	-0.025*** (0.006)	-0.025*** (0.006)	-0.025*** (0.006)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Sep20,[70;79]} + \delta_{Sep20,[70;79]})$	-0.077*** (0.007)	-0.040*** (0.007)	-0.040*** (0.007)	-0.040*** (0.007)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Oct20,[20;49]} + \delta_{Oct20,[20;49]})$	-0.052*** (0.008)	-0.085*** (0.008)	-0.085*** (0.008)	-0.085*** (0.008)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Oct20,[50;59]} + \delta_{Oct20,[50;59]})$	-0.062*** (0.006)	-0.083*** (0.006)	-0.083*** (0.006)	-0.083*** (0.006)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Oct20,[60;69]} + \delta_{Oct20,[60;69]})$	-0.116*** (0.006)	-0.110*** (0.006)	-0.110*** (0.006)	-0.110*** (0.006)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Oct20,[70;79]} + \delta_{Oct20,[70;79]})$	-0.168*** (0.007)	-0.131*** (0.008)	-0.131*** (0.008)	-0.131*** (0.008)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Nov20,[20;49]} + \delta_{Nov20,[20;49]})$	-0.020* (0.008)	-0.054*** (0.008)	-0.054*** (0.008)	-0.054*** (0.008)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Nov20,[50;59]} + \delta_{Nov20,[50;59]})$	-0.042*** (0.006)	-0.063*** (0.006)	-0.063*** (0.006)	-0.063*** (0.006)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Nov20,[60;69]} + \delta_{Nov20,[60;69]})$	-0.097*** (0.006)	-0.090*** (0.006)	-0.090*** (0.006)	-0.090*** (0.006)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Nov20,[70;79]} + \delta_{Nov20,[70;79]})$	-0.170*** (0.008)	-0.133*** (0.008)	-0.133*** (0.008)	-0.133*** (0.008)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Dec20,[20;49]} + \delta_{Dec20,[20;49]})$	-0.095*** (0.008)	-0.129*** (0.008)	-0.129*** (0.008)	-0.129*** (0.008)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Dec20,[50;59]} + \delta_{Dec20,[50;59]})$	-0.105*** (0.007)	-0.125*** (0.007)	-0.125*** (0.007)	-0.125*** (0.007)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Dec20,[60;69]} + \delta_{Dec20,[60;69]})$	-0.170*** (0.006)	-0.163*** (0.007)	-0.163*** (0.007)	-0.163*** (0.007)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Dec20,[70;79]} + \delta_{Dec20,[70;79]})$	-0.249*** (0.008)	-0.212*** (0.008)	-0.212*** (0.008)	-0.212*** (0.008)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jan21,[20;49]} + \delta_{Jan21,[20;49]})$	-0.238*** (0.008)	-0.296*** (0.009)	-0.296*** (0.009)	-0.296*** (0.009)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jan21,[50;59]} + \delta_{Jan21,[50;59]})$	-0.261*** (0.007)	-0.296*** (0.007)	-0.296*** (0.007)	-0.296*** (0.007)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jan21,[60;69]} + \delta_{Jan21,[60;69]})$	-0.348*** (0.007)	-0.337*** (0.007)	-0.337*** (0.007)	-0.337*** (0.007)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jan21,[70;79]} + \delta_{Jan21,[70;79]})$	-0.462*** (0.008)	-0.399*** (0.009)	-0.398*** (0.009)	-0.398*** (0.009)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Feb21,[20;49]} + \delta_{Feb21,[20;49]})$	-0.152*** (0.008)	-0.210*** (0.009)	-0.210*** (0.009)	-0.210*** (0.009)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Feb21,[50;59]} + \delta_{Feb21,[50;59]})$	-0.178*** (0.007)	-0.213*** (0.007)	-0.213*** (0.007)	-0.213*** (0.007)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Feb21,[60;69]} + \delta_{Feb21,[60;69]})$	-0.264*** (0.006)	-0.252*** (0.007)	-0.252*** (0.007)	-0.252*** (0.007)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Feb21,[70;79]} + \delta_{Feb21,[70;79]})$	-0.320*** (0.008)	-0.257*** (0.009)	-0.257*** (0.009)	-0.257*** (0.009)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Mar21,[20;49]} + \delta_{Mar21,[20;49]})$	-0.026** (0.008)	-0.083*** (0.009)	-0.083*** (0.009)	-0.083*** (0.009)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Mar21,[50;59]} + \delta_{Mar21,[50;59]})$	-0.048*** (0.007)	-0.083*** (0.007)	-0.083*** (0.007)	-0.083*** (0.007)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Mar21,[60;69]} + \delta_{Mar21,[60;69]})$	-0.110*** (0.007)	-0.099*** (0.007)	-0.099*** (0.007)	-0.099*** (0.007)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Mar21,[70;79]} + \delta_{Mar21,[70;79]})$	-0.162*** (0.008)	-0.098*** (0.009)	-0.098*** (0.009)	-0.098*** (0.009)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Apr21,[20;49]} + \delta_{Apr21,[20;49]})$	-0.008 (0.008)	-0.066*** (0.009)	-0.066*** (0.009)	-0.066*** (0.009)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Apr21,[50;59]} + \delta_{Apr21,[50;59]})$	-0.041*** (0.007)	-0.076*** (0.007)	-0.076*** (0.007)	-0.076*** (0.007)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Apr21,[60;69]} + \delta_{Apr21,[60;69]})$	-0.095*** (0.007)	-0.084*** (0.007)	-0.084*** (0.007)	-0.084*** (0.007)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Apr21,[70;79]} + \delta_{Apr21,[70;79]})$	-0.151*** (0.008)	-0.087*** (0.009)	-0.087*** (0.009)	-0.087*** (0.009)
Month FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Age Group \times $Year_t$ (Ψ_{it})	No	Yes	Yes	Yes
Income Group \times $Year_t$ (Ψ_{it})	No	No	Yes	Yes
Age Group \times Income Group \times $Year_t$ (Ψ_{it})	No	No	No	Yes
Observations	2,315,002	2,315,002	2,315,002	2,315,002
R ²	0.633	0.633	0.633	0.633
Adjusted R ²	0.623	0.623	0.624	0.624
Residual Std. Error	0.686	0.686	0.686	0.686

Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ().

Appendix A6 (Regression tables used for the figures)- Table 15: Impact of age on consumption expenditures by income group

	Dependent variable:		
	Log(<i>Expenses_{it}</i>)		
	20,061 ≤]20,061 ; 40,522]	≥ 40,522
	(1)	(2)	(3)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Mar20,[20;49]} + \delta_{Mar20,[20;49]})$	-0.100*** (0.011)	-0.148*** (0.010)	-0.153*** (0.029)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Mar20,[50;59]} + \delta_{Mar20,[50;59]})$	-0.082*** (0.010)	-0.147*** (0.007)	-0.178*** (0.017)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Mar20,[60;69]} + \delta_{Mar20,[60;69]})$	-0.088*** (0.009)	-0.139*** (0.009)	-0.185*** (0.013)
$After_t \times 1\{Month_t = Mar20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Mar20,[70;79]} + \delta_{Mar20,[70;79]})$	-0.110*** (0.009)	-0.185*** (0.011)	-0.237*** (0.018)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Apr20,[20;49]} + \delta_{Apr20,[20;49]})$	-0.270*** (0.013)	-0.344*** (0.010)	-0.384*** (0.031)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Apr20,[50;59]} + \delta_{Apr20,[50;59]})$	-0.242*** (0.010)	-0.362*** (0.009)	-0.444*** (0.020)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Apr20,[60;69]} + \delta_{Apr20,[60;69]})$	-0.303*** (0.010)	-0.451*** (0.010)	-0.495*** (0.015)
$After_t \times 1\{Month_t = Apr20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Apr20,[70;79]} + \delta_{Apr20,[70;79]})$	-0.362*** (0.010)	-0.555*** (0.014)	-0.584*** (0.020)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [20; 49]\}(\Delta_{May20,[20;49]} + \delta_{May20,[20;49]})$	-0.177*** (0.013)	-0.241*** (0.010)	-0.253*** (0.029)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [50; 59]\}(\Delta_{May20,[50;59]} + \delta_{May20,[50;59]})$	-0.136*** (0.010)	-0.238*** (0.008)	-0.303*** (0.019)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [60; 69]\}(\Delta_{May20,[60;69]} + \delta_{May20,[60;69]})$	-0.172*** (0.009)	-0.275*** (0.009)	-0.354*** (0.015)
$After_t \times 1\{Month_t = May20\} \times 1\{Age_i = [70; 79]\}(\Delta_{May20,[70;79]} + \delta_{May20,[70;79]})$	-0.219*** (0.010)	-0.309*** (0.012)	-0.378*** (0.020)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jun20,[20;49]} + \delta_{Jun20,[20;49]})$	0.016 (0.012)	-0.015 (0.010)	-0.005 (0.030)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jun20,[50;59]} + \delta_{Jun20,[50;59]})$	0.009 (0.010)	-0.022** (0.008)	-0.094*** (0.019)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jun20,[60;69]} + \delta_{Jun20,[60;69]})$	-0.020* (0.009)	-0.080*** (0.009)	-0.109*** (0.014)
$After_t \times 1\{Month_t = Jun20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jun20,[70;79]} + \delta_{Jun20,[70;79]})$	-0.080*** (0.010)	-0.101*** (0.012)	-0.154*** (0.020)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jul20,[20;49]} + \delta_{Jul20,[20;49]})$	0.085*** (0.014)	0.029* (0.012)	-0.077* (0.030)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jul20,[50;59]} + \delta_{Jul20,[50;59]})$	0.066*** (0.012)	0.046*** (0.009)	-0.037+ (0.020)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jul20,[60;69]} + \delta_{Jul20,[60;69]})$	0.042*** (0.011)	-0.022* (0.011)	-0.044** (0.015)
$After_t \times 1\{Month_t = Jul20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jul20,[70;79]} + \delta_{Jul20,[70;79]})$	-0.035** (0.011)	-0.085*** (0.013)	-0.135*** (0.020)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Aug20,[20;49]} + \delta_{Aug20,[20;49]})$	0.038** (0.013)	0.057*** (0.010)	0.024 (0.030)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Aug20,[50;59]} + \delta_{Aug20,[50;59]})$	0.024* (0.011)	0.058*** (0.008)	0.029 (0.021)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Aug20,[60;69]} + \delta_{Aug20,[60;69]})$	0.006 (0.009)	-0.042*** (0.010)	-0.051*** (0.015)
$After_t \times 1\{Month_t = Aug20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Aug20,[70;79]} + \delta_{Aug20,[70;79]})$	-0.032** (0.010)	-0.082*** (0.012)	-0.139*** (0.021)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Sep20,[20;49]} + \delta_{Sep20,[20;49]})$	0.038** (0.013)	0.029** (0.010)	0.022 (0.030)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Sep20,[50;59]} + \delta_{Sep20,[50;59]})$	0.019+ (0.011)	0.022** (0.008)	-0.014 (0.020)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Sep20,[60;69]} + \delta_{Sep20,[60;69]})$	0.002 (0.010)	-0.032*** (0.009)	-0.073*** (0.014)
$After_t \times 1\{Month_t = Sep20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Sep20,[70;79]} + \delta_{Sep20,[70;79]})$	-0.026* (0.011)	-0.050*** (0.012)	-0.074*** (0.020)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Oct20,[20;49]} + \delta_{Oct20,[20;49]})$	-0.063*** (0.013)	-0.094*** (0.011)	-0.144*** (0.031)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Oct20,[50;59]} + \delta_{Oct20,[50;59]})$	-0.080*** (0.011)	-0.074*** (0.009)	-0.123*** (0.019)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Oct20,[60;69]} + \delta_{Oct20,[60;69]})$	-0.089*** (0.010)	-0.116*** (0.010)	-0.150*** (0.015)
$After_t \times 1\{Month_t = Oct20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Oct20,[70;79]} + \delta_{Oct20,[70;79]})$	-0.138*** (0.011)	-0.107*** (0.013)	-0.175*** (0.020)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Nov20,[20;49]} + \delta_{Nov20,[20;49]})$	0.001 (0.013)	-0.089*** (0.011)	-0.117*** (0.034)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Nov20,[50;59]} + \delta_{Nov20,[50;59]})$	-0.045*** (0.011)	-0.063*** (0.009)	-0.125*** (0.020)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Nov20,[60;69]} + \delta_{Nov20,[60;69]})$	-0.063*** (0.010)	-0.096*** (0.010)	-0.145*** (0.015)
$After_t \times 1\{Month_t = Nov20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Nov20,[70;79]} + \delta_{Nov20,[70;79]})$	-0.106*** (0.011)	-0.156*** (0.013)	-0.192*** (0.021)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [20; 49]\}(\Delta_{Dec20,[20;49]} + \delta_{Dec20,[20;49]})$	-0.096*** (0.014)	-0.153*** (0.011)	-0.146*** (0.032)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [50; 59]\}(\Delta_{Dec20,[50;59]} + \delta_{Dec20,[50;59]})$	-0.110*** (0.012)	-0.138*** (0.009)	-0.138*** (0.020)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [60; 69]\}(\Delta_{Dec20,[60;69]} + \delta_{Dec20,[60;69]})$	-0.126*** (0.010)	-0.184*** (0.010)	-0.216*** (0.015)
$After_t \times 1\{Month_t = Dec20\} \times 1\{Age_i = [70; 79]\}(\Delta_{Dec20,[70;79]} + \delta_{Dec20,[70;79]})$	-0.184*** (0.012)	-0.221*** (0.013)	-0.284*** (0.021)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Jan21,[20;49]} + \delta_{Jan21,[20;49]})$	-0.270*** (0.016)	-0.298*** (0.012)	-0.413*** (0.037)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Jan21,[50;59]} + \delta_{Jan21,[50;59]})$	-0.267*** (0.013)	-0.304*** (0.009)	-0.360*** (0.022)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Jan21,[60;69]} + \delta_{Jan21,[60;69]})$	-0.303*** (0.012)	-0.360*** (0.012)	-0.384*** (0.017)
$After_t \times 1\{Month_t = Jan21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Jan21,[70;79]} + \delta_{Jan21,[70;79]})$	-0.382*** (0.013)	-0.408*** (0.016)	-0.441*** (0.023)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Feb21,[20;49]} + \delta_{Feb21,[20;49]})$	-0.155*** (0.015)	-0.241*** (0.012)	-0.308*** (0.038)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Feb21,[50;59]} + \delta_{Feb21,[50;59]})$	-0.150*** (0.013)	-0.239*** (0.009)	-0.295*** (0.022)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Feb21,[60;69]} + \delta_{Feb21,[60;69]})$	-0.175*** (0.011)	-0.297*** (0.011)	-0.352*** (0.017)
$After_t \times 1\{Month_t = Feb21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Feb21,[70;79]} + \delta_{Feb21,[70;79]})$	-0.216*** (0.013)	-0.293*** (0.015)	-0.345*** (0.023)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Mar21,[20;49]} + \delta_{Mar21,[20;49]})$	-0.026+ (0.015)	-0.118*** (0.012)	-0.178*** (0.038)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Mar21,[50;59]} + \delta_{Mar21,[50;59]})$	-0.022 (0.013)	-0.104*** (0.010)	-0.206*** (0.023)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Mar21,[60;69]} + \delta_{Mar21,[60;69]})$	-0.038*** (0.012)	-0.128*** (0.012)	-0.191*** (0.017)
$After_t \times 1\{Month_t = Mar21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Mar21,[70;79]} + \delta_{Mar21,[70;79]})$	-0.063*** (0.013)	-0.119*** (0.015)	-0.190*** (0.024)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [20; 49]\}(\Delta_{Apr21,[20;49]} + \delta_{Apr21,[20;49]})$	-0.019 (0.016)	-0.097*** (0.012)	-0.117** (0.039)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [50; 59]\}(\Delta_{Apr21,[50;59]} + \delta_{Apr21,[50;59]})$	-0.045*** (0.013)	-0.088*** (0.010)	-0.135*** (0.023)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [60; 69]\}(\Delta_{Apr21,[60;69]} + \delta_{Apr21,[60;69]})$	-0.049*** (0.012)	-0.099*** (0.012)	-0.134*** (0.017)
$After_t \times 1\{Month_t = Apr21\} \times 1\{Age_i = [70; 79]\}(\Delta_{Apr21,[70;79]} + \delta_{Apr21,[70;79]})$	-0.054*** (0.013)	-0.110*** (0.016)	-0.166*** (0.024)
Groups	25838	25556	7000
Observations	1,018,346	1,017,717	278,939
R ²	0.607	0.536	0.537
Adjusted R ²	0.597	0.524	0.525
Residual Std. Error	0.717	0.658	0.668

Note:

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001
All columns estimated with person fixed effects
Standard Errors clustered by person in ()

Appendix A6 (Regression tables used for the figures) - Table 16: Changes in expenditures of public servants in different income groups during the epidemic relative to a counterfactual without covid for people with and without comorbidity

	<i>Dependent variable:</i>	
	<i>log(Expense_{it})</i>	
	(1)	(2)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Mar20,[20;49]} + \delta_{Mar20,[20;49]})$	-0.070*** (0.007)	-0.099*** (0.016)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Mar20,[50;59]} + \delta_{Mar20,[50;59]})$	-0.070*** (0.006)	-0.072*** (0.013)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Mar20,[60;69]} + \delta_{Mar20,[60;69]})$	-0.060*** (0.005)	-0.046*** (0.012)
$After_t \times \mathbf{1}\{Month_t = Mar20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Mar20,[70;79]} + \delta_{Mar20,[70;79]})$	-0.080*** (0.007)	-0.067*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Apr20,[20;49]} + \delta_{Apr20,[20;49]})$	-0.255*** (0.008)	-0.332*** (0.018)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Apr20,[50;59]} + \delta_{Apr20,[50;59]})$	-0.268*** (0.006)	-0.317*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Apr20,[60;69]} + \delta_{Apr20,[60;69]})$	-0.323*** (0.006)	-0.375*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Apr20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Apr20,[70;79]} + \delta_{Apr20,[70;79]})$	-0.381*** (0.008)	-0.403*** (0.016)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{May20,[20;49]} + \delta_{May20,[20;49]})$	-0.148*** (0.008)	-0.173*** (0.018)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{May20,[50;59]} + \delta_{May20,[50;59]})$	-0.137*** (0.006)	-0.174*** (0.014)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{May20,[60;69]} + \delta_{May20,[60;69]})$	-0.160*** (0.006)	-0.206*** (0.014)
$After_t \times \mathbf{1}\{Month_t = May20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{May20,[70;79]} + \delta_{May20,[70;79]})$	-0.180*** (0.007)	-0.207*** (0.015)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Jun20,[20;49]} + \delta_{Jun20,[20;49]})$	0.066*** (0.008)	0.042* (0.018)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Jun20,[50;59]} + \delta_{Jun20,[50;59]})$	0.052*** (0.006)	0.019 (0.013)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Jun20,[60;69]} + \delta_{Jun20,[60;69]})$	0.025*** (0.006)	-0.024+ (0.013)
$After_t \times \mathbf{1}\{Month_t = Jun20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Jun20,[70;79]} + \delta_{Jun20,[70;79]})$	-0.009 (0.007)	-0.025 (0.015)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Jul20,[20;49]} + \delta_{Jul20,[20;49]})$	0.110*** (0.009)	0.103*** (0.020)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Jul20,[50;59]} + \delta_{Jul20,[50;59]})$	0.116*** (0.007)	0.091*** (0.016)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Jul20,[60;69]} + \delta_{Jul20,[60;69]})$	0.082*** (0.007)	0.066*** (0.016)
$After_t \times \mathbf{1}\{Month_t = Jul20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Jul20,[70;79]} + \delta_{Jul20,[70;79]})$	0.013+ (0.008)	0.034* (0.016)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Aug20,[20;49]} + \delta_{Aug20,[20;49]})$	0.109*** (0.008)	0.137*** (0.017)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Aug20,[50;59]} + \delta_{Aug20,[50;59]})$	0.108*** (0.006)	0.109*** (0.015)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Aug20,[60;69]} + \delta_{Aug20,[60;69]})$	0.052*** (0.006)	0.058*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Aug20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Aug20,[70;79]} + \delta_{Aug20,[70;79]})$	0.018* (0.007)	0.039* (0.015)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Sep20,[20;49]} + \delta_{Sep20,[20;49]})$	0.098*** (0.008)	0.099*** (0.017)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Sep20,[50;59]} + \delta_{Sep20,[50;59]})$	0.084*** (0.006)	0.077*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Sep20,[60;69]} + \delta_{Sep20,[60;69]})$	0.053*** (0.006)	0.039** (0.013)
$After_t \times \mathbf{1}\{Month_t = Sep20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Sep20,[70;79]} + \delta_{Sep20,[70;79]})$	0.045*** (0.007)	0.039* (0.015)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Oct20,[20;49]} + \delta_{Oct20,[20;49]})$	-0.023** (0.008)	-0.010 (0.017)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Oct20,[50;59]} + \delta_{Oct20,[50;59]})$	-0.016* (0.006)	-0.021 (0.014)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Oct20,[60;69]} + \delta_{Oct20,[60;69]})$	-0.033*** (0.006)	-0.035** (0.014)
$After_t \times \mathbf{1}\{Month_t = Oct20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Oct20,[70;79]} + \delta_{Oct20,[70;79]})$	-0.047*** (0.008)	-0.048** (0.015)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Nov20,[20;49]} + \delta_{Nov20,[20;49]})$	0.013 (0.008)	-0.002 (0.017)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Nov20,[50;59]} + \delta_{Nov20,[50;59]})$	0.007 (0.006)	-0.023 (0.014)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Nov20,[60;69]} + \delta_{Nov20,[60;69]})$	-0.014* (0.006)	-0.014 (0.014)
$After_t \times \mathbf{1}\{Month_t = Nov20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Nov20,[70;79]} + \delta_{Nov20,[70;79]})$	-0.049*** (0.008)	-0.056*** (0.015)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i = [20; 49]\}(\Delta_{Dec20,[20;49]} + \delta_{Dec20,[20;49]})$	-0.067*** (0.008)	-0.053** (0.017)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i = [50; 59]\}(\Delta_{Dec20,[50;59]} + \delta_{Dec20,[50;59]})$	-0.061*** (0.007)	-0.055*** (0.015)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i = [60; 69]\}(\Delta_{Dec20,[60;69]} + \delta_{Dec20,[60;69]})$	-0.083*** (0.006)	-0.110*** (0.014)
$After_t \times \mathbf{1}\{Month_t = Dec20\} \times \mathbf{1}\{Age_i = [70; 79]\}(\Delta_{Dec20,[70;79]} + \delta_{Dec20,[70;79]})$	-0.121*** (0.008)	-0.165*** (0.016)
Month FE	Yes	Yes
Individual FE	Yes	Yes
Age Group \times Year _t (Ψ_{it})	Yes	Yes
Income Group \times Year _t (Ψ_{it})	Yes	Yes
Age Group \times Income Group \times Year _t (Ψ_{it})	Yes	Yes
Observations	1,972,669	342,333
R ²	0.631	0.568
Adjusted R ²	0.621	0.557
Residual Std. Error	0.696	0.635

Note: + p<0.1; * p<0.05; ** p<0.01; *** p<0.001
Standard Errors clustered by person in ()